

DEPARTMENT OF TRANSPORTATION**DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION**

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May 28, 2013

Re: In the Matter of Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band

I am sending this letter on behalf of the California Department of Transportation (Caltrans) to express concern over the proposal to revise Part 15 of the Federal Communication Commission (FCC) Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band.

As you know, in October 1999, the FCC completed the rulemaking process and allocated 75 MHz of spectrum (5850-5925 MHz) in the 5.9 GHz band for Dedicated Short Range Communications (DSRC), to be used by the transportation community to significantly improve transportation safety and mobility. In the years since that decision, public and private sector entities nationwide (including Caltrans) have invested millions of dollars to develop DSRC technologies for use in transportation. Caltrans alone has spent close to \$7 million on various research projects that depend upon availability of an interference-free DSRC wireless network. This development has taken place under the leadership of the U. S. Department of Transportation (USDOT) through its Connected Vehicle Research Program.

The transmit power levels being considered in the Notice of Proposed Rulemaking (NPRM) are of greatest concern to Caltrans. The NPRM would allow U-NII devices to transmit at up to 4 Watts with omni-directional antennae, and up to 200 Watts for point-to-point directional transmission. In our opinion, these power levels have significant potential to interfere with nearby DSRC devices, most of which will transmit at only 400 milli-Watts of power. Without further testing, it is difficult to determine what levels of interference might be created by this considerable difference in transmit power levels.

Some DSRC-based safety and mobility applications being developed under the Connected Vehicle Research Program include:

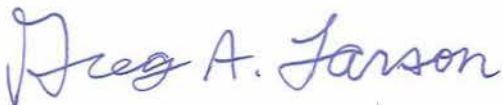
- Cooperative Forward Collision Warning
- Intersection Collision Avoidance
- Electronic Toll Collection and Parking Systems
- Commercial Vehicle Clearance and Safety Systems
- Transit Signal Priority
- Vehicle Rollover Warning
- Highway-Rail Intersection Warning
- Cooperative Adaptive Cruise Control

USDOT estimates that widespread deployment of Connected Vehicle technologies based on DSRC could prevent or reduce the impact of 81 percent of unimpaired vehicle crashes that occur today, representing the next big leap forward in the goal of reducing roadway fatalities and injuries. Utilizing DSRC will help achieve the objective of preventing vehicle crashes that cost our society an estimated \$230 billion each year in economic impact.

DSRC meets all the current and future needs of the transportation industry, and it satisfies all the technical requirements necessary to enable the challenging safety and mobility applications envisioned for its use. It is capable of high-speed data communications between vehicles, and between vehicles and the roadside, over a distance of up to 1,000 meters while travelling at highway speeds. DSRC provides a reliable communications channel that has high availability and low latency; allowing vehicle safety systems to be designed that warn of hazardous situations in milliseconds, so drivers can make informed decisions that avoid crashes. Unlike other low power, short-range transmitting technologies in the United States, such as Wi-Fi, the FCC rulemaking in 1999 gave DSRC a recognized legal status with valuable protections against radio interference from other users.

Caltrans, along with its public and private partners, is extremely concerned that sharing the DSRC spectrum with non-transportation users without properly testing for adverse impacts would jeopardize critical safety applications for which there are high expectations, and in which millions of dollars in research and development have been invested. I strongly urge the FCC to order additional studies to be performed to determine the extent of any detrimental effects of U-NII devices on nearby DSRC devices. In this manner, we will all help ensure that the next generation of drivers can enjoy safer roads and endure fewer roadway crashes than our generation.

Sincerely,



GREG A. LARSON, Chief
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